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Serial No.: 10/678,805 Filed: 10/03/03
Examiner: Group Art Unit: 1645
Applicant: Madhavi Krishnan
Title: **Methods of Performing Biochemical
Reactions in a Convective Flow Field**
Atty. Docket No.: UM-07718 Sheet 1 of 21

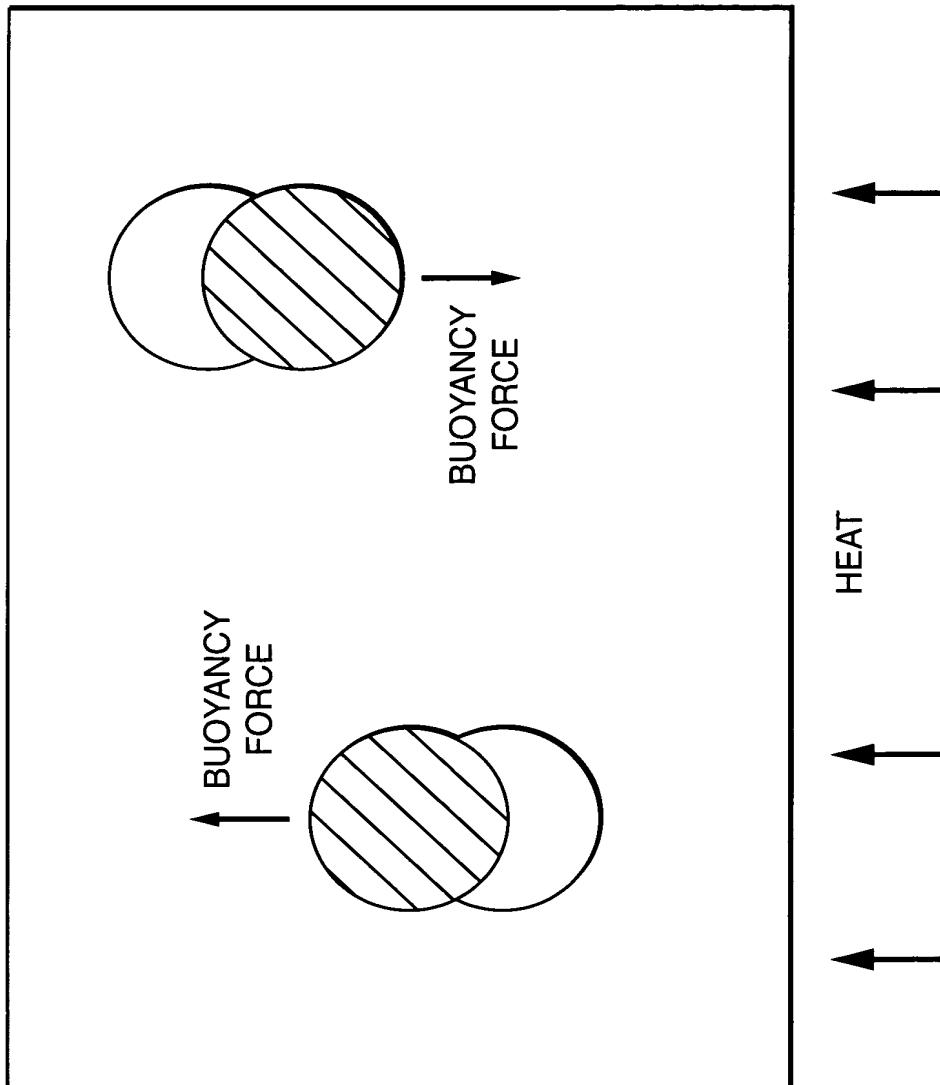


FIG. 1

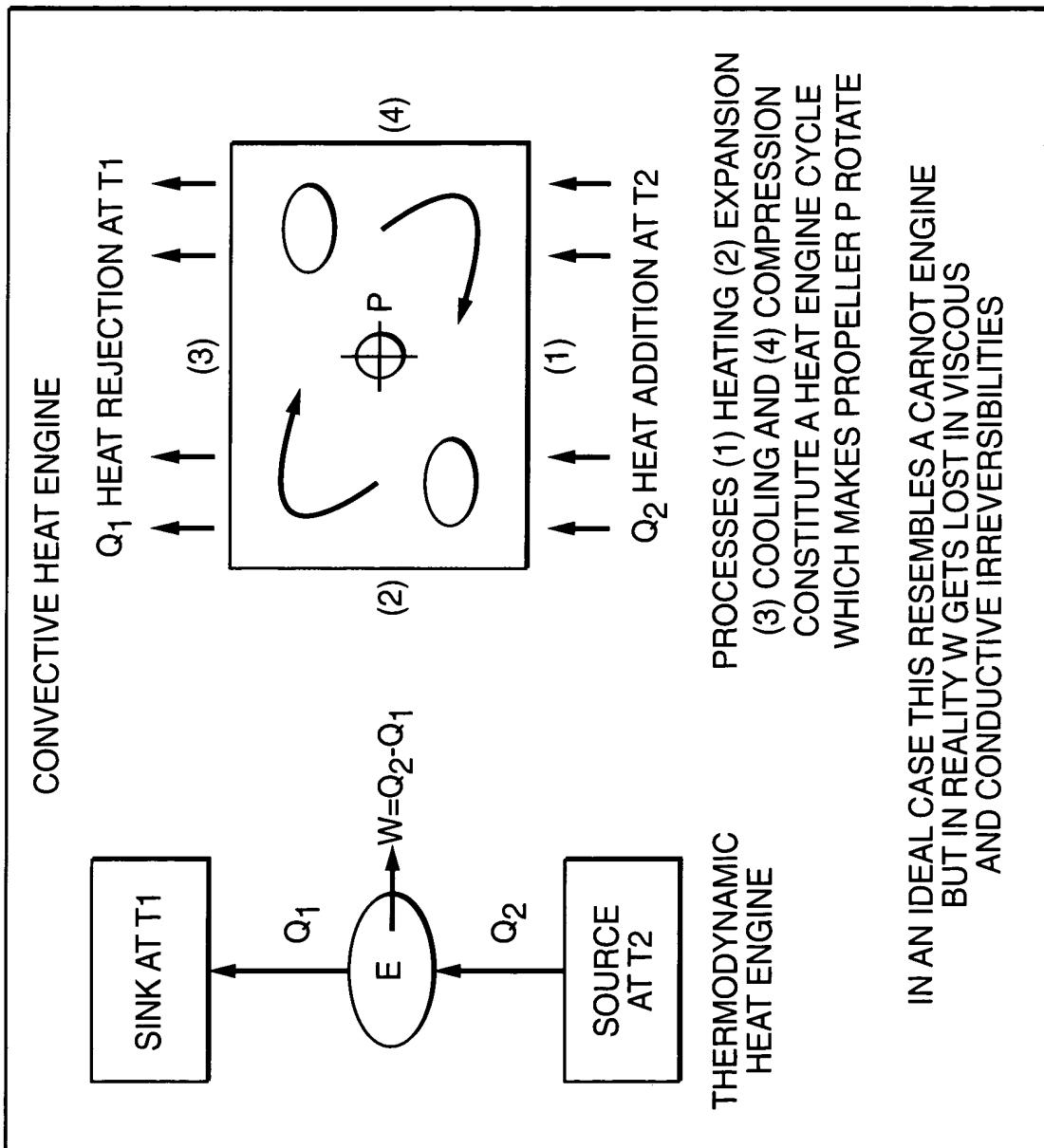
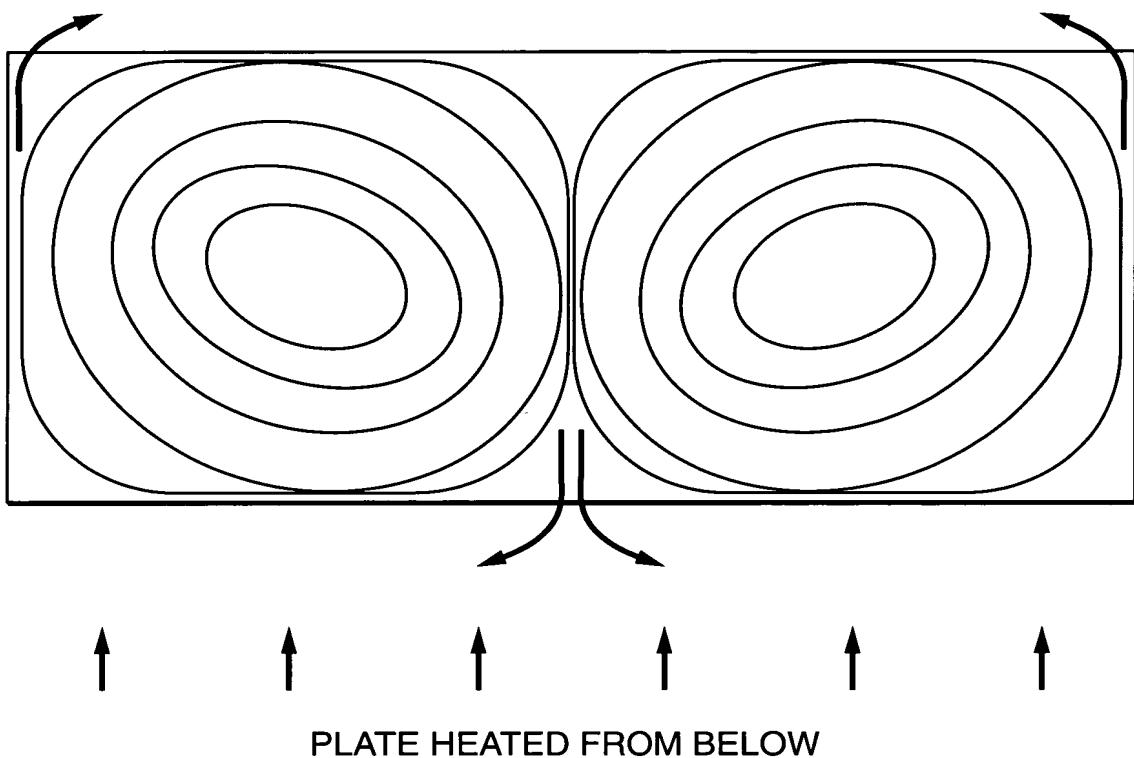


FIG. 2



ENERGY IS TRANSFERRED FROM BOTTOM TO TOP BY THE CONVECTION CELLS FORMED IN THE FLUID WHEN Ra EXCEEDS 1708. THE DIRECTION OF ROTATION OF TWO ADJACENT CELLS ARE SHOWN IN THE FIGURE

FIG. 3

CLASSICAL MARBLE-IN-A-BOWL ANALOGY OF
STABILITY ANALYSIS OF ONSET OF CONVECTIVE FLOW

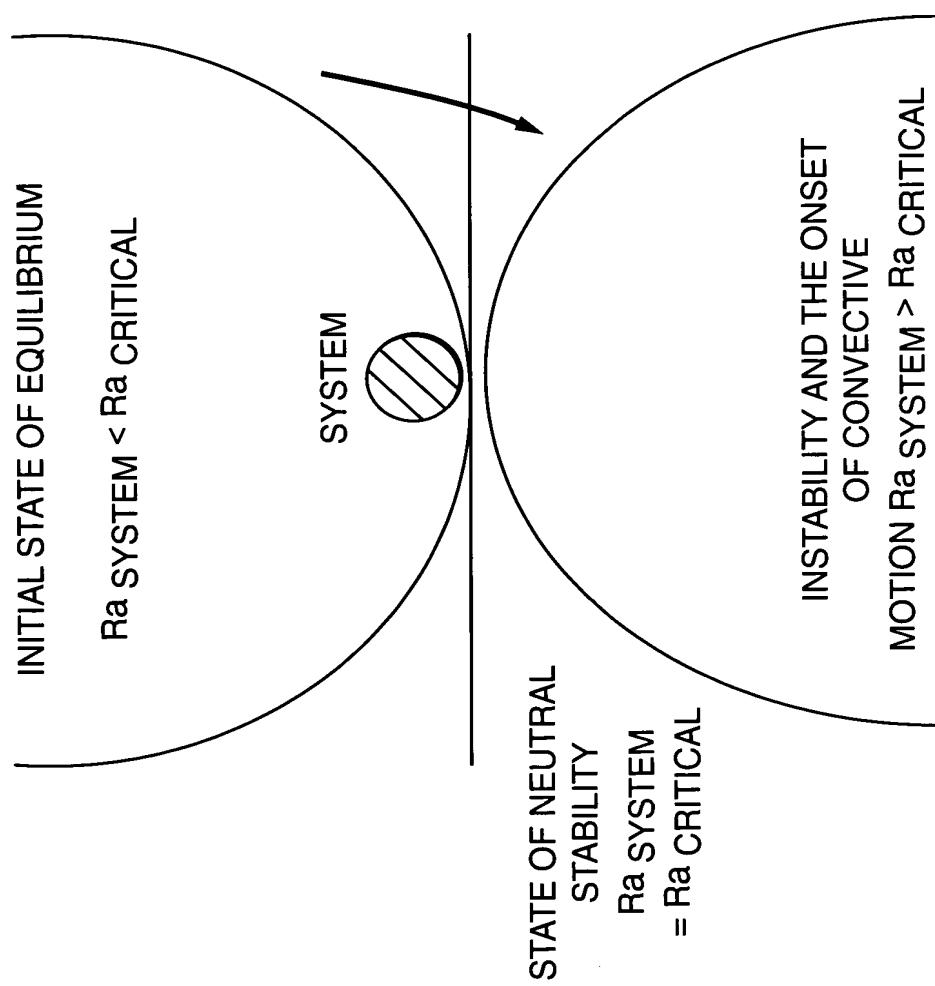


FIG. 4

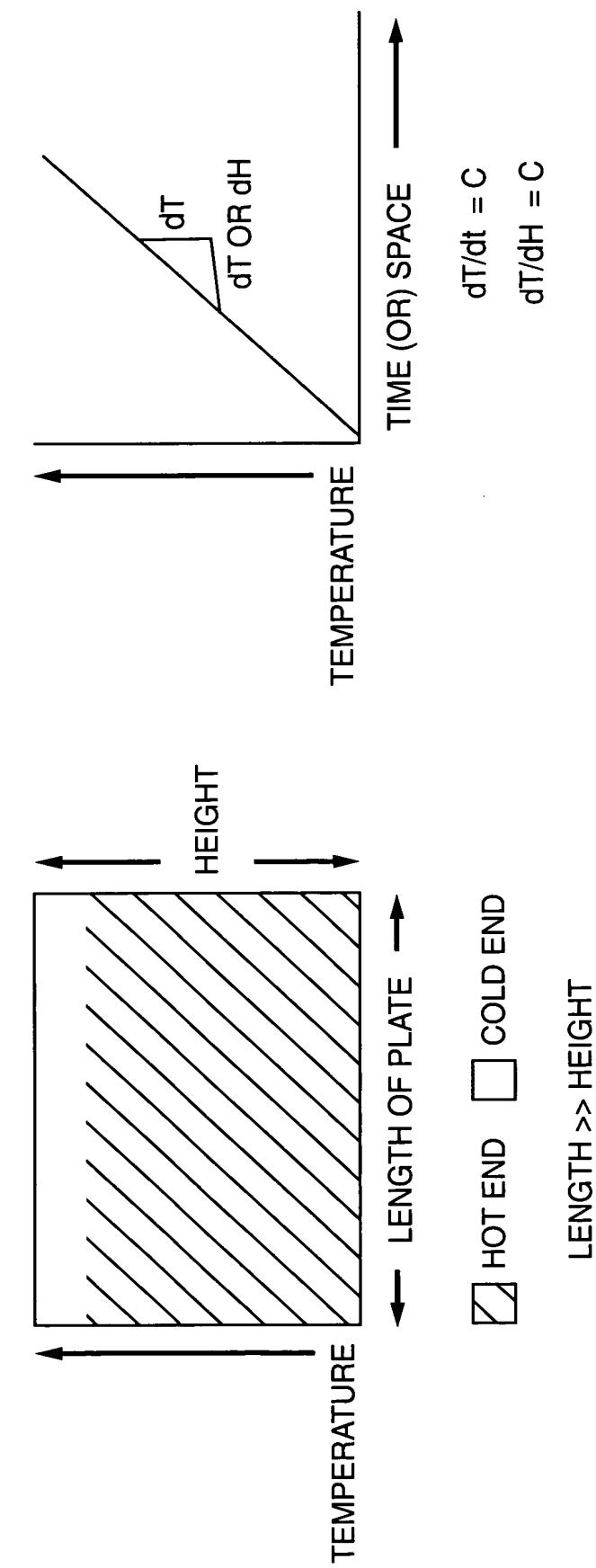


FIG. 5

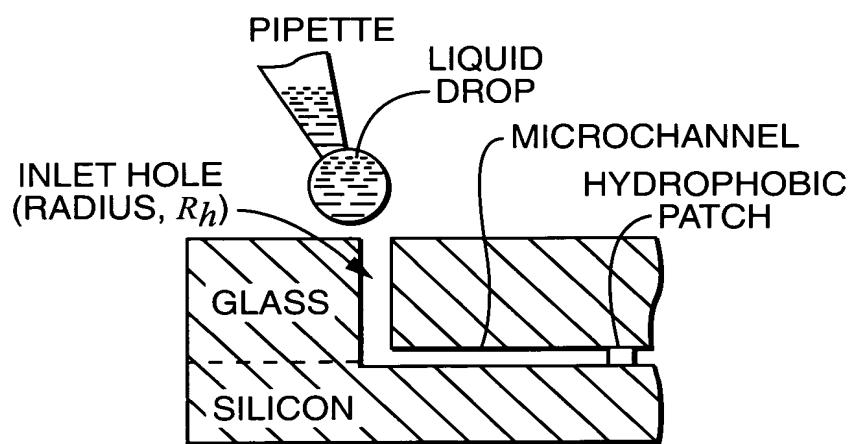


FIG. 6A

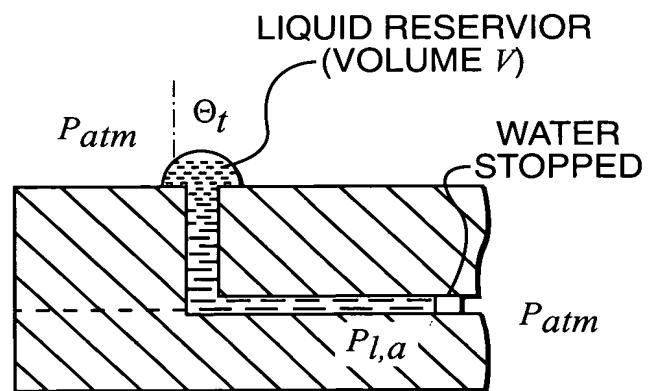


FIG. 6B

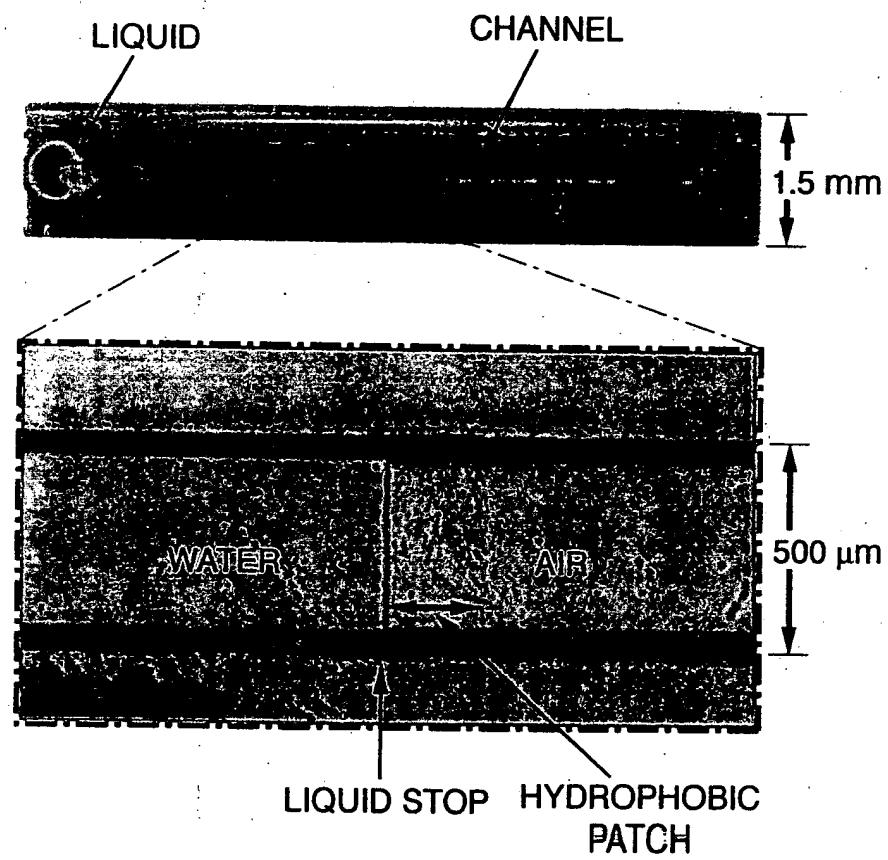


FIG. 6C

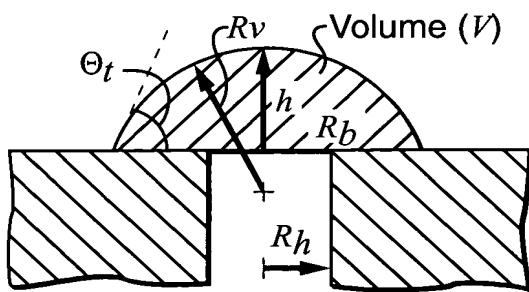


FIG. 7A

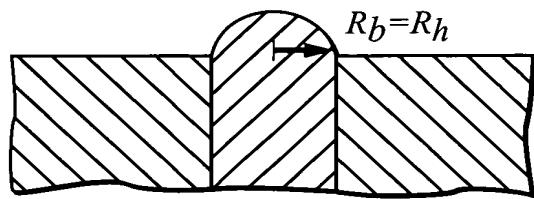


FIG. 7B

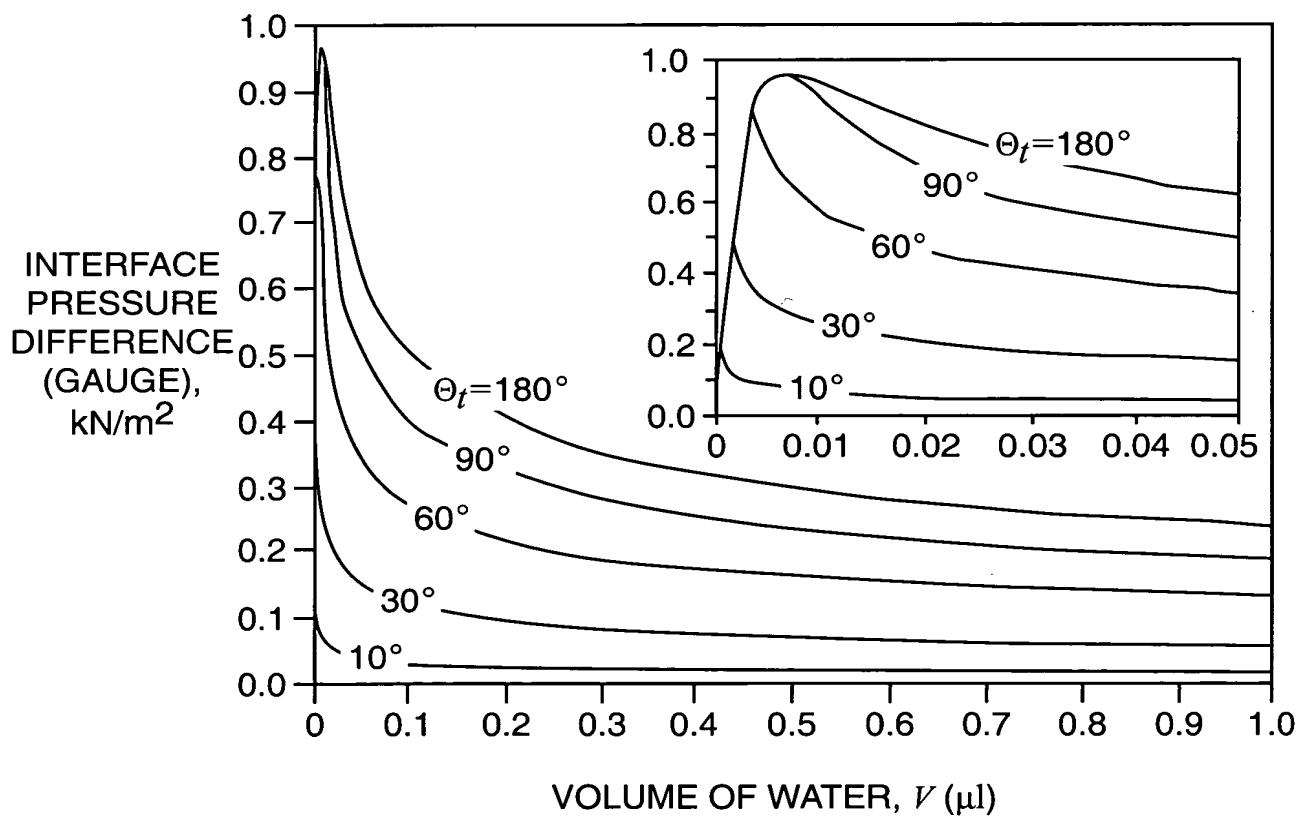


FIG. 7C

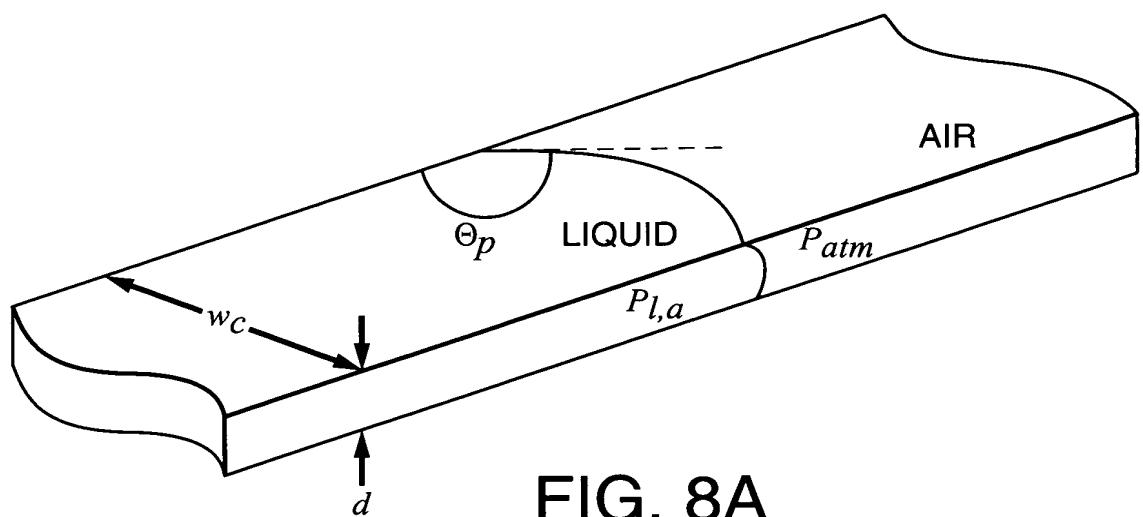


FIG. 8A

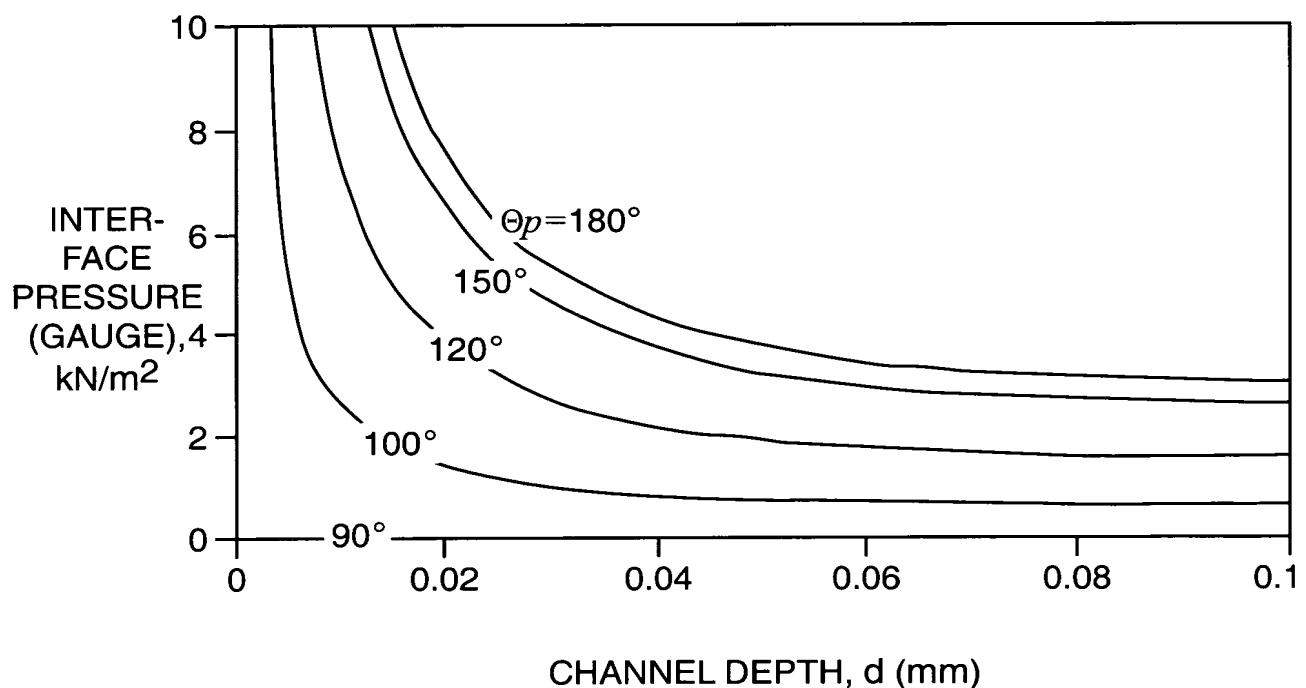


FIG. 8B

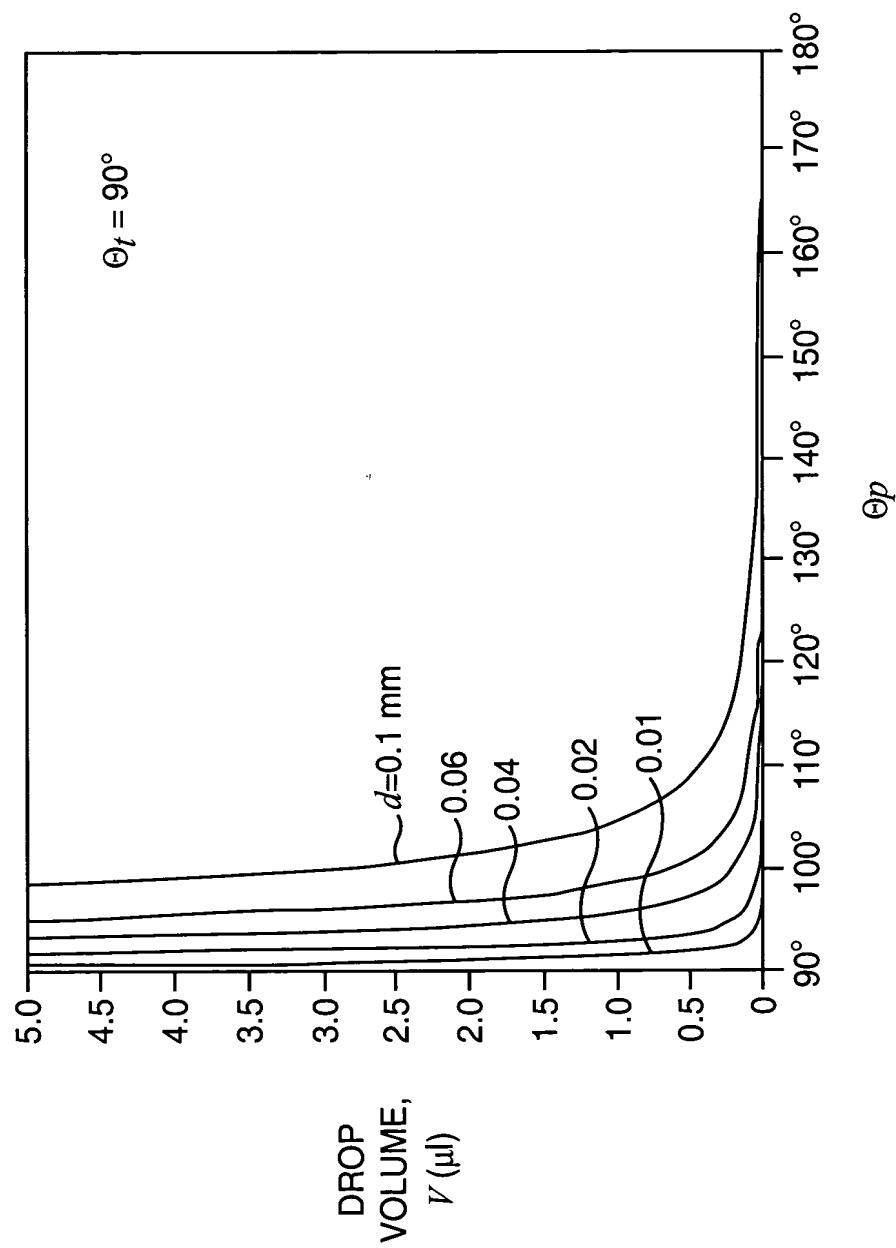


FIG. 9

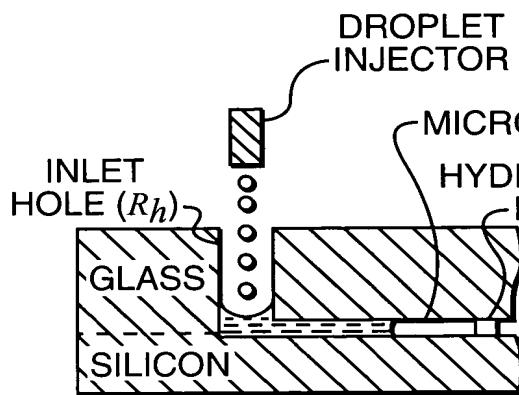


FIG. 10A

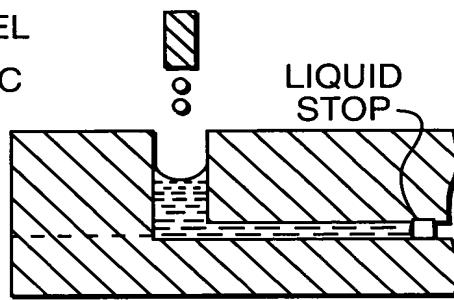


FIG. 10B

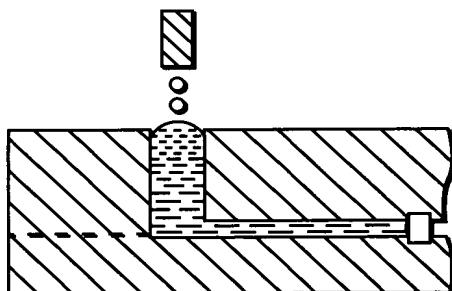


FIG. 10C

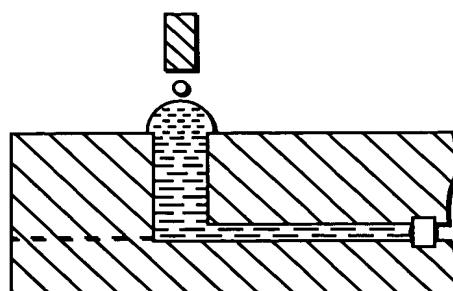


FIG. 10D

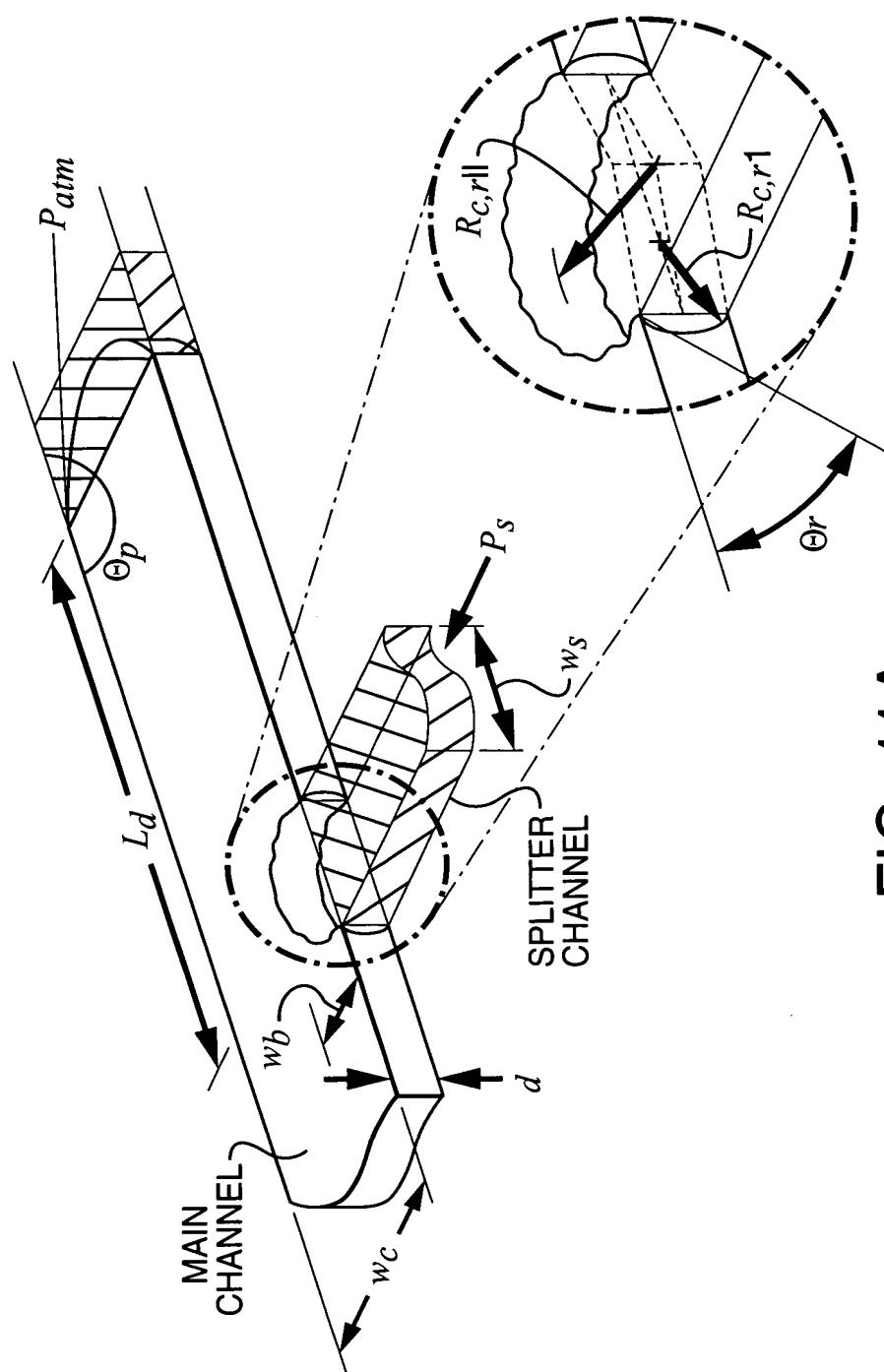


FIG. 11A

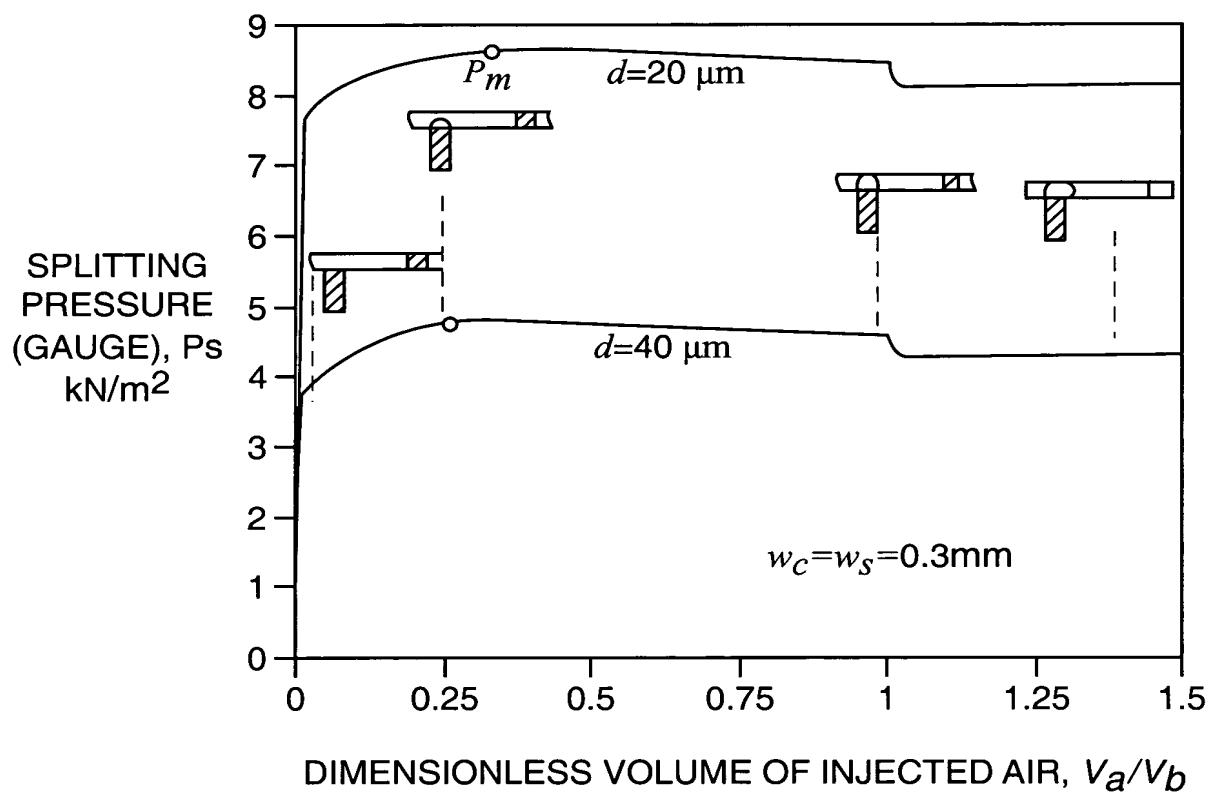


FIG. 11B

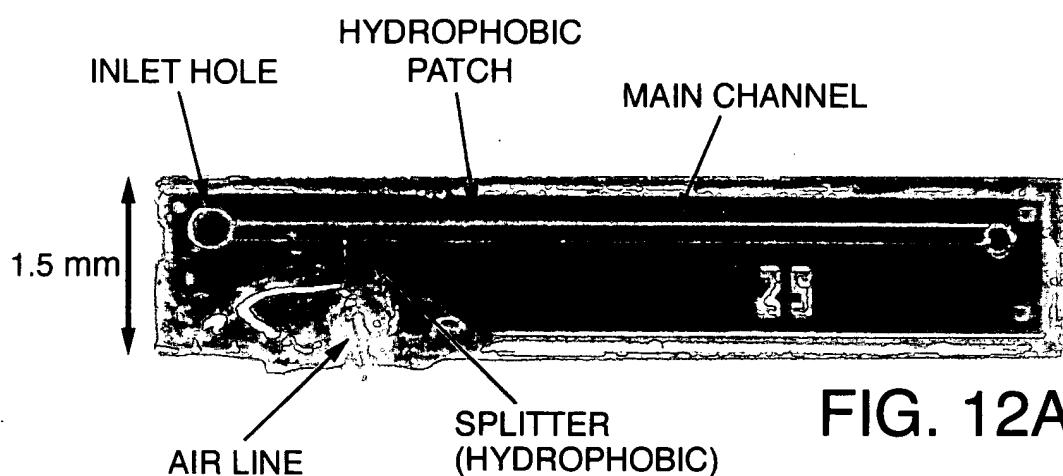


FIG. 12A

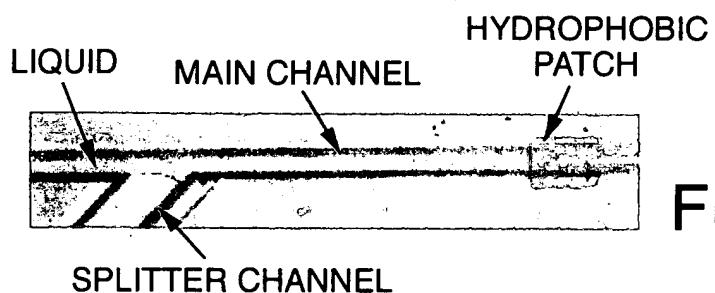


FIG. 12B

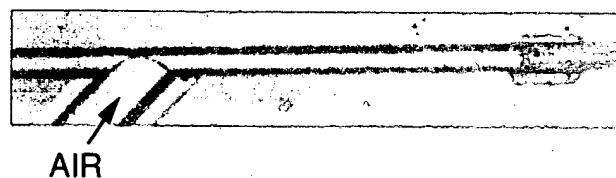


FIG. 12C

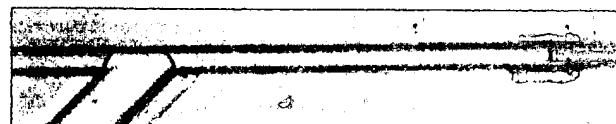


FIG. 12D

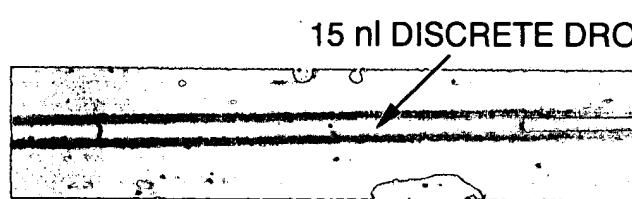
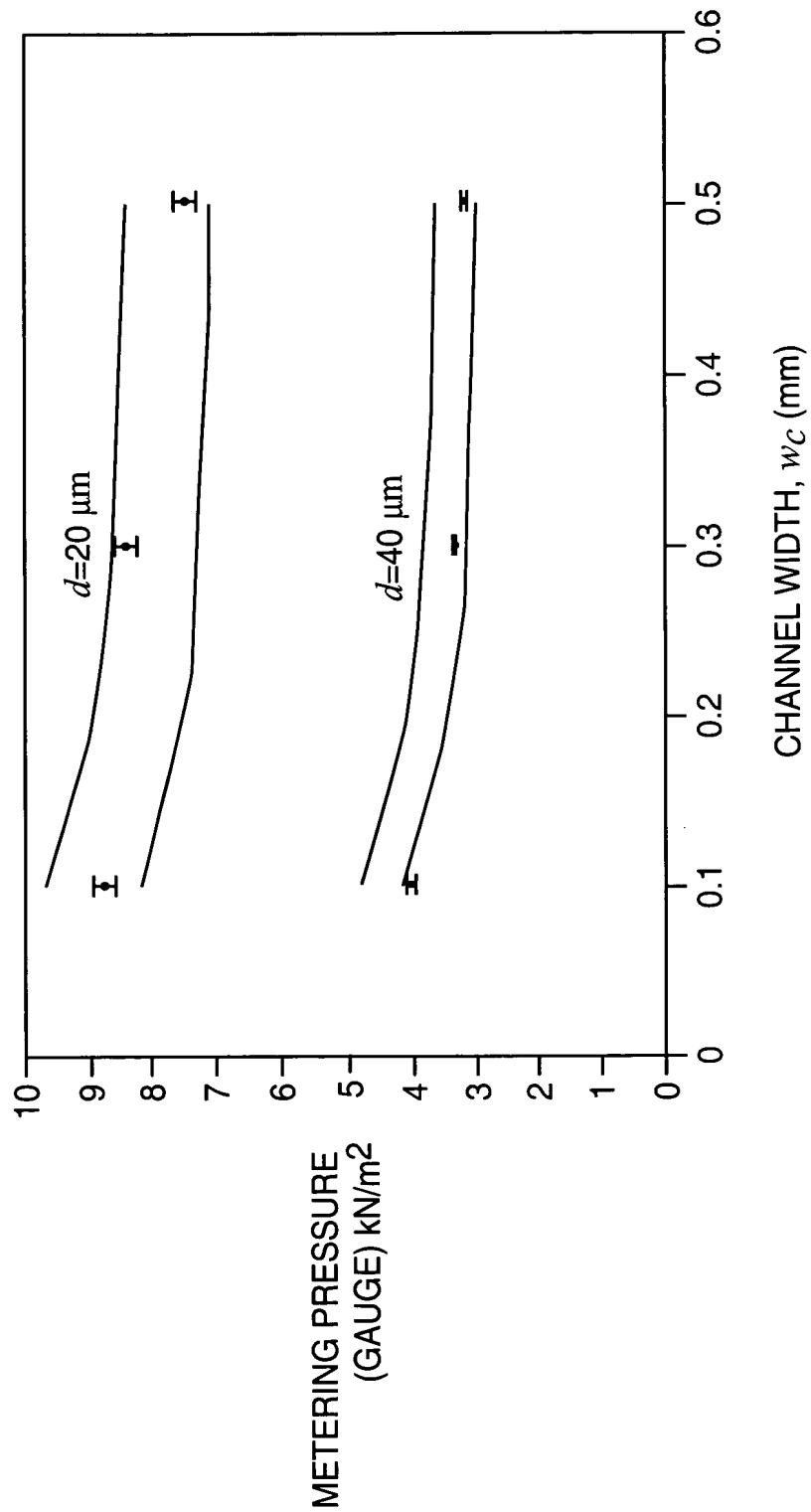


FIG. 12E



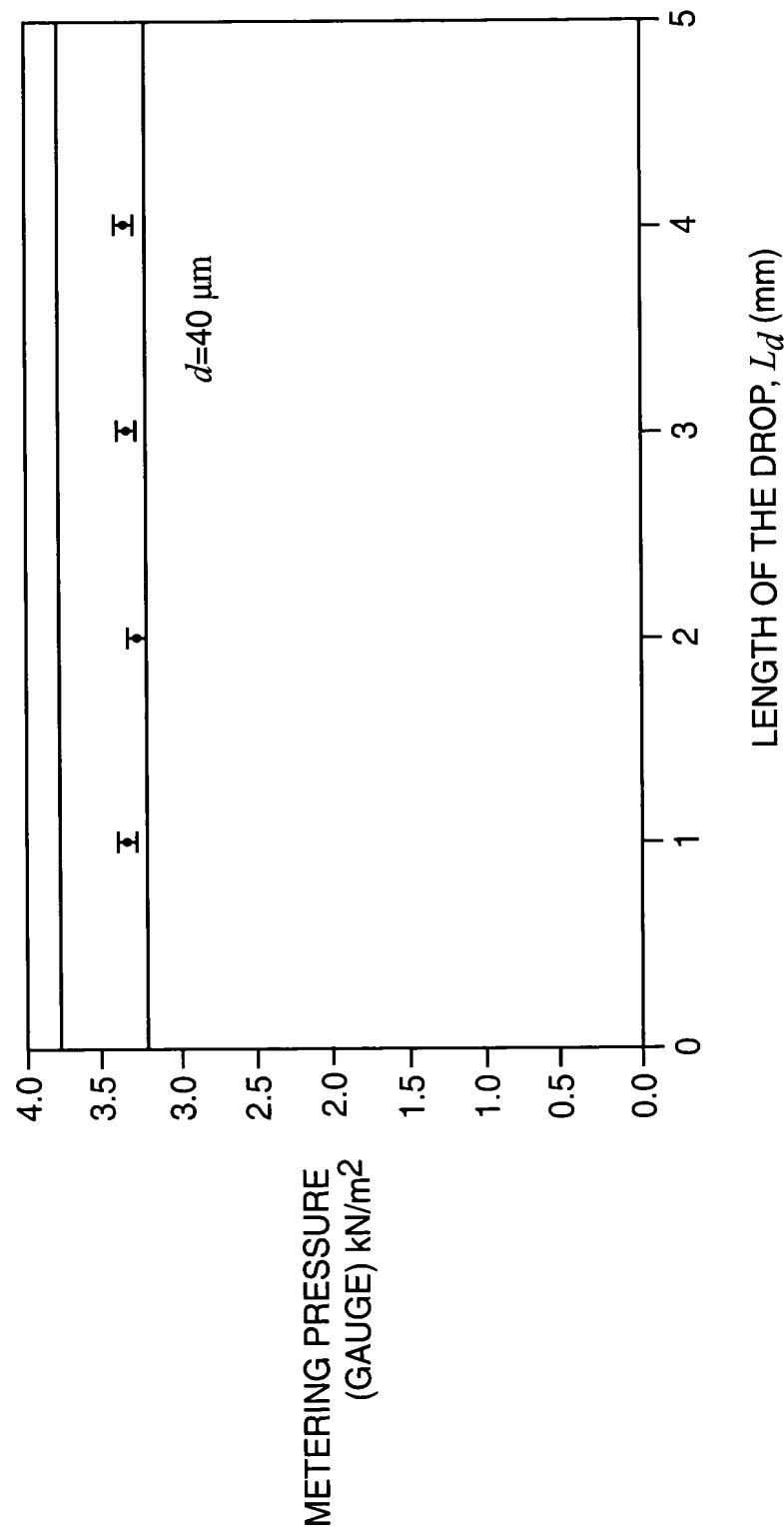


FIG. 13B

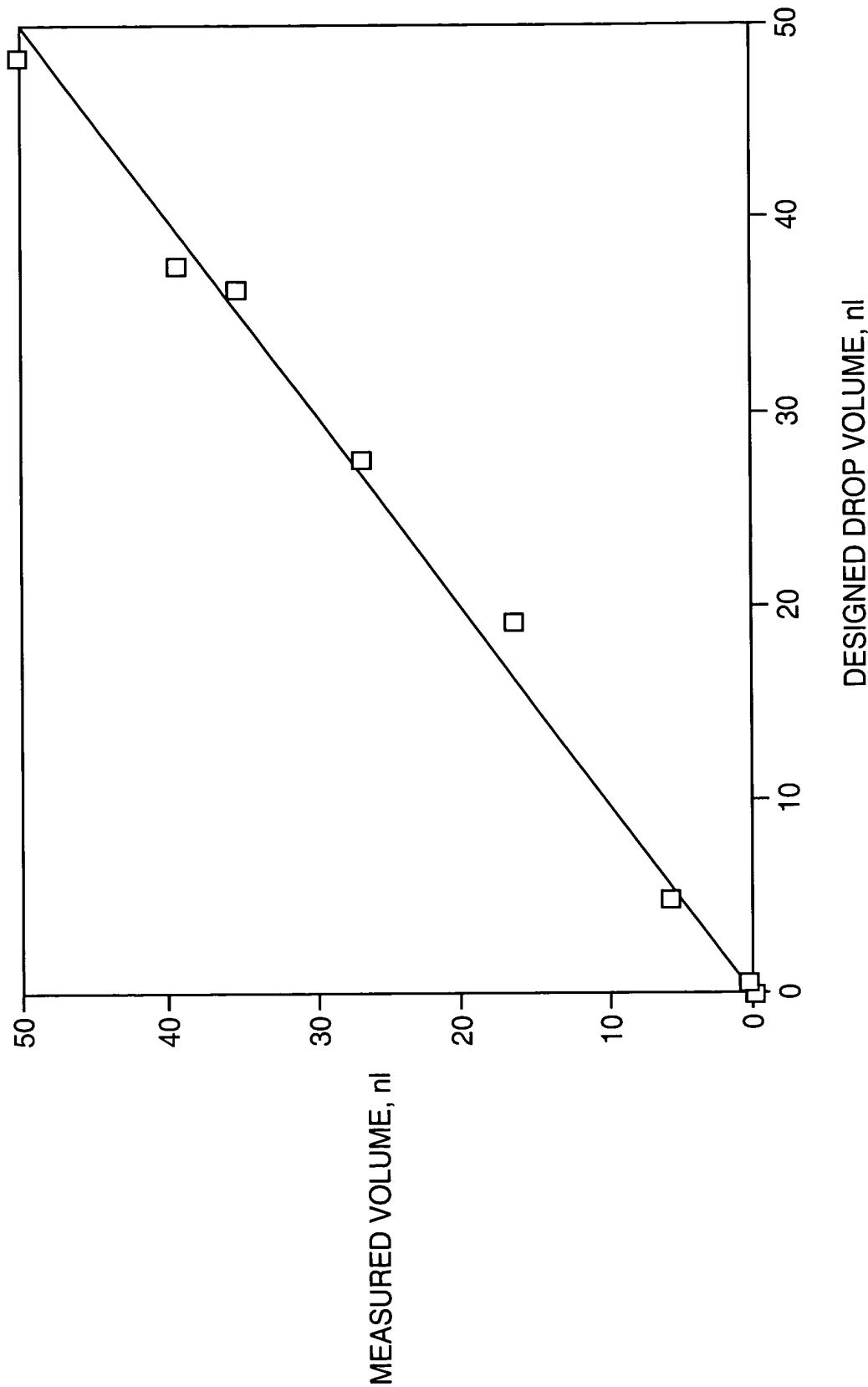


FIG. 14

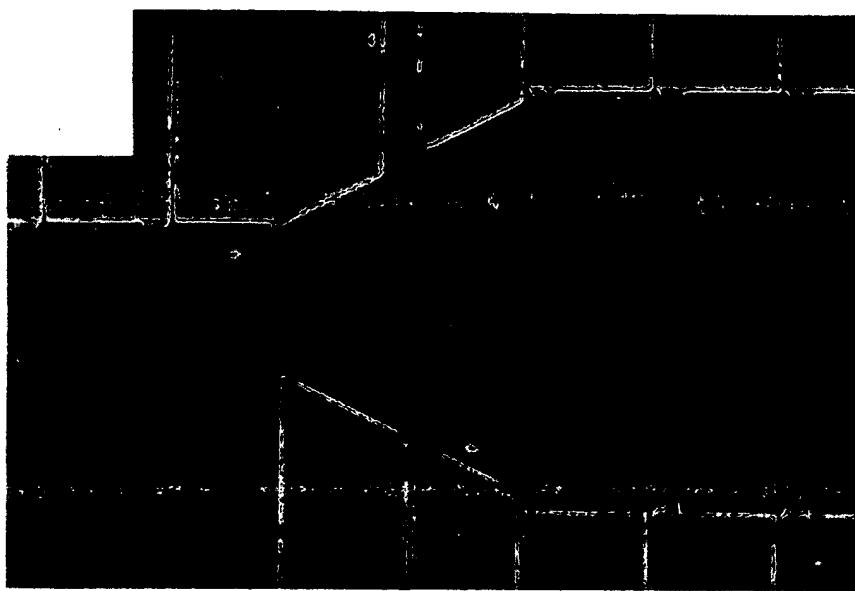


FIG. 15A

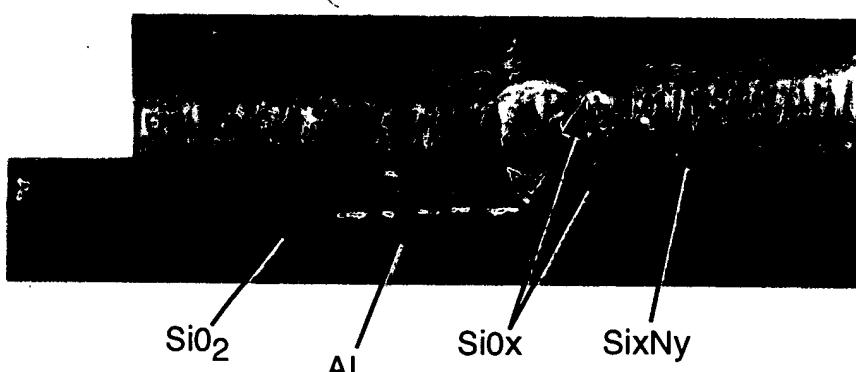


FIG. 15B

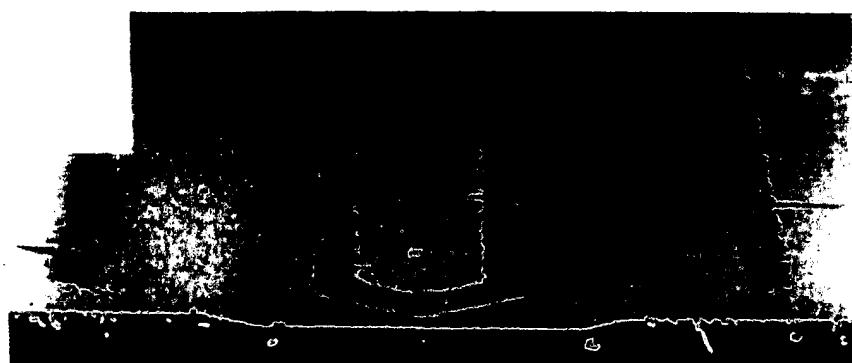


FIG. 15C

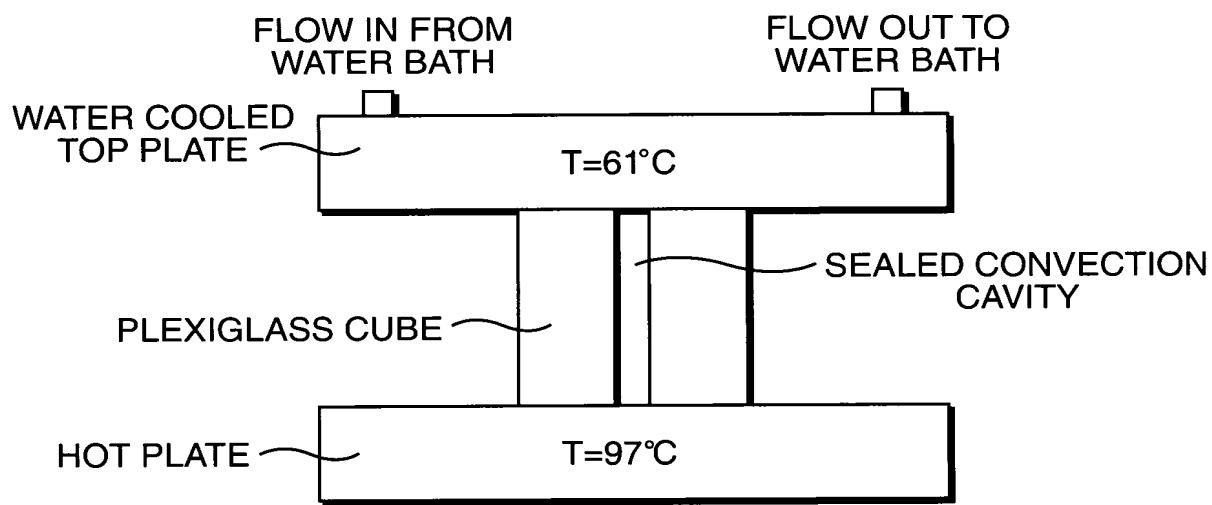


FIG. 16A

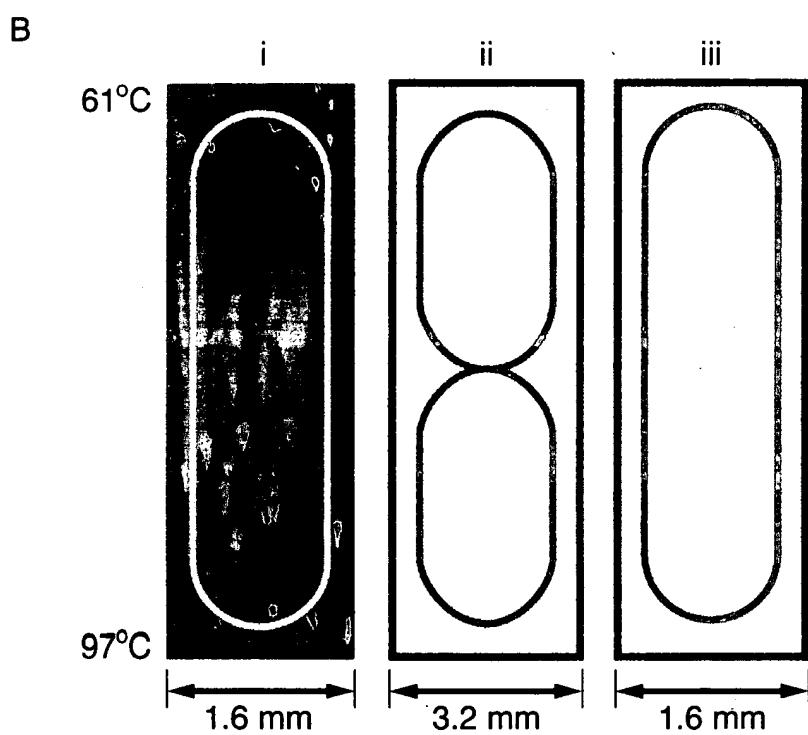


FIG. 16B

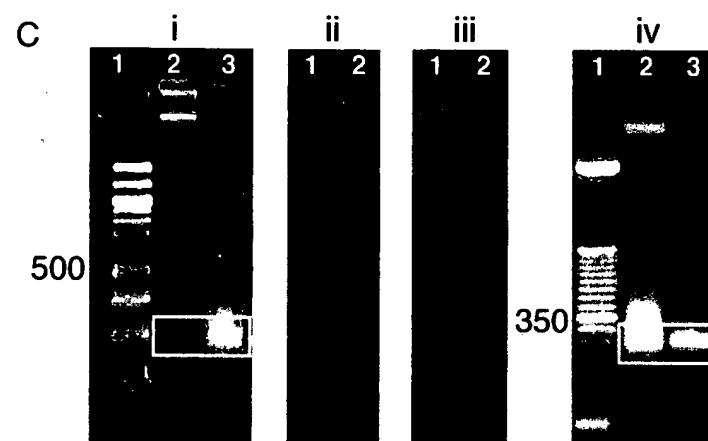


FIG. 16C